

<b>Change Number</b> <b>DRAFT</b> M-45-00-01A	<b>Federal Facility Agreement and Consent Order</b> <b>Change Control Form</b> Do not use blue ink. Type or print using black ink.	<b>Date</b> August 30, 2000
<b>Originator</b> USDOE & Ecology Negotiation Team <span style="float: right;"><b>Phone</b> N/A</span>		
<b>Class of Change</b> <input checked="" type="checkbox"/> I – Signatories <span style="margin-left: 100px;"><input type="checkbox"/> II – Executive Manager</span> <span style="margin-left: 100px;"><input type="checkbox"/> III – Project Manager</span>		
<b>Change Title</b> Modification of <u>Hanford Federal Facility Agreement and Consent Order</u> (Agreement) provisions governing near term Single-Shell Tank waste retrieval activities necessary for compliance with Washington's Hazardous Waste Management Act (HWMA).		
<b>Description/Justification of Change</b> <u>Introduction</u> This Agreement modification establishes near term Agreement milestones, target dates, and associated Agreement language governing single-shell tank (SST) waste retrieval activities prior to September 30, 2006, i.e., Agreement modifications necessary to achieve compliance with federal and state hazardous waste requirements. Ecology and USDOE have concluded negotiations and have submitted this M-45-001A change, the approval of which will establish / modify Agreement requirements. The near term strategy for SST waste retrieval activities has shifted from focusing on maximizing the number of tanks entered for retrieval (regardless of waste volume or content) to a focus on scheduling the retrieval of wastes from those SST's with a high volume of contaminants of concern. These contaminants are defined as mobile, long-lived radionuclides that have a potential of reaching the groundwater and Columbia River. The near term strategy also focuses on the performance of key retrieval technology demonstrations in a variety of waste forms and tank farm locations to establish a technical basis for future work. The near term work scope will also focus on the performance of risk assessments, incorporating vadose zone characterization data on a tank-by-tank basis, and on updating tank farm closure/post closure work plans. Modification scope includes but is not limited to completion of one "Limits of Technology" retrieval demonstration, initiation of a second "Limits of Technology" retrieval demonstration, and retrieval of sufficient SST waste containing an estimated 800 curies of contaminants of concern and occupying a minimum of 2 million gallons of DST space (per DOE, Best-Basis Inventory data, 8/01/2000).		
<b>Impact of Change</b> Work under this M-45-00-01A modification shall be managed through one unified schedule incorporating Agreement milestones and target dates, DOE (internal agency) milestones, and DOE contractor baseline. Modification of DOE contractor baseline(s) and issuance of associated DOE work directives and/or authorizations that are not consistent with Agreement requirements shall not be finalized prior to approval of an Agreement Change Control Form submitted pursuant to Action Plan Section 12.0. On approval of this M-45-00-01A change, Hanford site baselines, internal planning, management, and budget documents will be modified accordingly.		
<b>Affected Documents</b> The <u>Hanford Federal Facility Agreement and Consent Order</u> , as amended, DOE's annual Land Disposal Restrictions Report, and Hanford site internal planning, management, and budget documents (e.g., Agreement Action Plan, Appendix D, DOE and DOE contractor Baseline Change Control documents; Multi Year Work Plans; Sitewide Systems Engineering Control documents; Project Management Plans; and the Hanford Site Integrated Priority List (IPL). In addition, this submittal includes a new appendix to the Agreement (appendix H).		
<b>Approvals</b>		
		_____ Approved _____ Disapproved
Ecology	Date	
		_____ Approved _____ Disapproved
DOE-ORP	Date	
		_____ Approved _____ Disapproved
DOE-RL	Date	
		_____ Approved _____ Disapproved
EPA	Date	

**Description/Justification of Change (Cont.)**

The following modifications are hereby made to HFFACO major milestone series M-45-00 (Complete closure of all single-shell tank farms). Modifications made to existing HFFACO requirements are shown here as either **shaded new text** or deleted ~~strikeout~~ text as follows:

M-45-00	COMPLETE CLOSURE OF ALL SINGLE SHELL TANK FARMS.	9/30/2024
<b>LEAD AGENCY: ECOLOGY</b>	<p>CLOSURE WILL FOLLOW RETRIEVAL OF AS MUCH TANK WASTE AS TECHNICALLY POSSIBLE, WITH TANK WASTE RESIDUES NOT TO EXCEED 360 CUBIC FEET (CU. FT.) IN EACH OF THE 100 SERIES TANKS, 30 CU. FT. IN EACH OF THE 200 SERIES TANKS, OR THE LIMIT OF WASTE RETRIEVAL TECHNOLOGY CAPABILITY, WHICHEVER IS LESS. IF THE DOE BELIEVES THAT WASTE RETRIEVAL TO THESE LEVELS IS NOT POSSIBLE FOR A TANK, THEN DOE WILL SUBMIT A DETAILED EXPLANATION TO EPA AND ECOLOGY EXPLAINING WHY THESE LEVELS CANNOT BE ACHIEVED, AND SPECIFYING THE QUANTITIES OF WASTE THAT THE DOE PROPOSES TO LEAVE IN THE TANK. THE REQUEST WILL BE APPROVED OR DISAPPROVED BY EPA AND ECOLOGY ON A TANK-BY-TANK BASIS. PROCEDURES FOR MODIFYING THE RETRIEVAL CRITERIA LISTED ABOVE, AND FOR PROCESSING WAIVER REQUESTS ARE OUTLINED IN THE APPENDIX TO THIS CHANGE REQUEST.</p> <p>FOLLOWING COMPLETION OF RETRIEVAL, SIX OPERABLE UNITS (TANK FARMS), AS DESCRIBED IN APPENDIX C (200-BP-7, 200-PO-3, 200-RO-4, 200-TP-5, 200-TP-6, 200-UP-3), WILL BE REMEDIATED IN ACCORDANCE WITH THE APPROVED CLOSURE PLANS. FINAL CLOSURE OF THE OPERABLE UNITS (TANK FARMS) SHALL BE DEFINED AS REGULATORY APPROVAL OF COMPLETION OF CLOSURE ACTIONS AND COMMENCEMENT OF POST-CLOSURE ACTIONS.</p> <p>FOR THE PURPOSES OF THIS AGREEMENT ALL UNITS LOCATED WITHIN THE BOUNDARY OF EACH TANK FARM WILL BE CLOSED IN ACCORDANCE WITH WAC 173-303-610. THIS INCLUDES CONTAMINATED SOIL AND ANCILLARY EQUIPMENT THAT WERE PREVIOUSLY DESIGNATED AS RCRA PAST PRACTICE UNITS. ADOPTING THIS APPROACH WILL ENSURE EFFICIENT USE OF FUNDING AND WILL REDUCE POTENTIAL DUPLICATION OF EFFORT VIA APPLICATION OF DIFFERENT REGULATORY REQUIREMENTS: WAC 173-303-610 FOR CLOSURE OF THE TSD UNITS AND RCRA SECTION 3004(U) FOR REMEDIATION OF RCRA PAST PRACTICE UNITS.</p> <p>ALL PARTIES RECOGNIZE THAT THE RECLASSIFICATION OF PREVIOUSLY IDENTIFIED RCRA PAST PRACTICE UNITS TO ANCILLARY EQUIPMENT ASSOCIATED WITH THE TSD UNIT IS STRICTLY FOR APPLICATION OF A CONSISTENT CLOSURE APPROACH. UPGRADES TO PREVIOUSLY CLASSIFIED RCRA PAST PRACTICE UNITS TO ACHIEVE COMPLIANCE WITH RCRA OR DANGEROUS WASTE INTERIM STATUS TECHNICAL STANDARDS FOR TANK SYSTEMS (I.E., SECONDARY CONTAINMENT, INTEGRITY ASSESSMENTS, ETC.) WILL NOT BE MANDATED AS A RESULT OF THIS ACTION. HOWEVER, ANY EQUIPMENT MODIFIED OR REPLACED WILL MEET INTERIM STATUS STANDARDS. IN EVALUATING CLOSURE OPTIONS FOR SINGLE-SHELL TANKS, CONTAMINATED SOIL, AND ANCILLARY EQUIPMENT, ECOLOGY AND EPA WILL CONSIDER COST, TECHNICAL PRACTICABILITY, AND POTENTIAL EXPOSURE TO RADIATION. CLOSURE OF ALL UNITS WITHIN THE BOUNDARY OF A GIVEN TANK FARM WILL BE ADDRESSED IN A CLOSURE PLAN FOR THE SINGLE-SHELL TANKS.</p> <p>COMPLIANCE WITH THE WORK SCHEDULES SET FORTH IN THIS M-45 SERIES IS DEFINED AS THE PERFORMANCE OF SUFFICIENT WORK TO ASSURE WITH REASONABLE CERTAINTY THAT DOE WILL ACCOMPLISH SERIES M-45 MAJOR AND INTERIM MILESTONE REQUIREMENTS. <b>NOTE: DOE HAS APPEALED THE ISSUE NOTED WITHIN THE PRECEDING SENTENCE TO THE WASHINGTON POLLUTION CONTROL HEARINGS BOARD. THE OUTCOME OF THIS APPEAL MAY AFFECT THIS M-45-00 LANGUAGE.</b></p> <p>DOE INTERNAL WORK SCHEDULES (E.G., DOE APPROVED SCHEDULE BASELINES) AND ASSOCIATED WORK DIRECTIVES AND AUTHORIZATIONS SHALL BE CONSISTENT WITH THE REQUIREMENTS OF THIS AGREEMENT. MODIFICATION OF DOE CONTRACTOR BASELINE(S) AND ISSUANCE OF ASSOCIATED DOE WORK</p>	

**Description/Justification of Change (Cont.)**

	DIRECTIVES AND/OR AUTHORIZATIONS THAT ARE NOT CONSISTENT WITH AGREEMENT REQUIREMENTS SHALL NOT BE FINALIZED PRIOR TO APPROVAL OF AN AGREEMENT CHANGE REQUEST SUBMITTED PURSUANT TO AGREEMENT ACTION PLAN SECTION 12.0	
M-45-00A	<p>COMPLETE RENEGOTIATION OF "NEAR TERM" (I.E., PRIOR TO 9/30/2006) SST WASTE RETRIEVAL ACTIVITIES.</p> <p>THESE NEGOTIATIONS SHALL TAKE INTO ACCOUNT VARIABLES SUCH AS WORK IN PROGRESS, DOE'S DEVELOPING <b>WASTE TREATMENT COMPLEX</b> PRIVATIZATION INITIATIVE AND ENVIRONMENTAL AND HUMAN HEALTH RISKS ASSOCIATED WITH RELEASES FROM DOE'S SSTs. NEGOTIATIONS SHALL BE DESIGNED TO ESTABLISH A SUFFICIENT NUMBER OF AGREEMENT MILESTONES AND TARGET DATES TO EFFECTIVELY DRIVE EACH PHASE OF WORK INCLUDING BUT NOT LIMITED TO: 1.) WASTE RETRIEVAL TECHNOLOGY DEVELOPMENT (INCLUDING CONFINED SLUICING AND ROBOTIC TECHNOLOGIES), 2.) RETRIEVAL PERFORMANCE EVALUATIONS, 3.) LEAK DETECTION, MONITORING, AND MITIGATION, 4.) SELECTION OF SST RETRIEVAL SEQUENCE, AND 5.) DESIGN, CONSTRUCTION AND OPERATION OF SST WASTE RETRIEVAL SYSTEMS. THESE M-45-00A NEGOTIATIONS SHALL INCLUDE THE ESTABLISHMENT OF INTERIM MILESTONES FOR: A) INITIATION OF CONSTRUCTION, B) INITIATION OF RETRIEVAL, AND C) COMPLETION OF CONFINED SLUICING AT TANK C-104, AND D) INITIATION OF CONSTRUCTION OF A SALTCAKE DISSOLUTION AND RETRIEVAL SYSTEM, E) INITIATION OF RETRIEVAL, AND F) COMPLETION OF SALTCAKE WASTE RETRIEVAL AT TANK S-103.<sup>1</sup></p>	8/31/2000 (Completed)
M-45-00B	<p><b>COMPLETE "NEAR TERM" SST WASTE RETRIEVAL ACTIVITIES.</b></p> <p><b>UNTIL THE WASTE TREATMENT COMPLEX IS OPERATIONAL, THE AMOUNT OF DST SPACE AVAILABLE TO RECEIVE SST WASTE IS LIMITED. THE NEAR TERM FOCUS FOR SST WASTE RETRIEVAL WILL INCLUDE MAXIMIZING THE TRANSFER OF CONTAMINANTS OF CONCERN (LONG-LIVED, MOBILE RADIONUCLIDES) INTO THE DST SYSTEM. WORK UNDER THIS MILESTONE ALSO INCLUDES COMPLETION OF ONE "LIMITS OF TECHNOLOGY" RETRIEVAL DEMONSTRATION, INITIATION OF A SECOND "LIMITS OF TECHNOLOGY" RETRIEVAL DEMONSTRATION, AND RETRIEVAL OF SUFFICIENT SST WASTE CONTAINING NO LESS THAN 800 CURIES OF CONTAMINANTS OF CONCERN AND OCCUPYING A MINIMUM OF 2 MILLION GALLONS OF DST SPACE (PER DOE BEST-BASIS INVENTORY DATA, 8/01/2000). "LIMITS OF TECHNOLOGY" RETRIEVAL DEMONSTRATIONS WILL SEEK TO IMPROVE UPON PAST PRACTICE SLUICING (PPS) BASELINE TECHNOLOGY INCLUDING BUT NOT LIMITED TO RETRIEVAL EFFICIENCY, LEAK LOSS DURING RETRIEVAL, AND LEAK DETECTION MITIGATION AND MONITORING (LDMM).</b></p> <p><b>PROCEDURES FOR MODIFYING THE RETRIEVAL CRITERIA LISTED WITHIN THE ASSOCIATED MILESTONES, AND FOR PROCESSING WAIVER REQUESTS ARE OUTLINED IN A NEW APPENDIX "H" TO THE AGREEMENT. THE APPENDIX IS ATTACHED TO THIS CHANGE REQUEST.</b></p>	9/30/2006
M-45-02	<p>SUBMIT ANNUAL UPDATES TO SST RETRIEVAL SEQUENCE DOCUMENT.</p> <p>THIS PROVIDES FOR AN ANNUAL UPDATE OF A SST RETRIEVAL SEQUENCE DOCUMENT THAT WILL DEFINE THE TANK <b>RETRIEVAL SEQUENCE</b>, SELECTION CRITERIA <b>AND</b>, <b>TANK SELECTION</b> RATIONALE, REFERENCE RETRIEVAL METHOD(S) FOR EACH TANK, AND THE ESTIMATED RETRIEVAL SCHEDULES. <b>THE RETRIEVAL SEQUENCE DOCUMENT WILL DETAIL RETRIEVAL METHODOLOGIES TO BE EMPLOYED AND ESTIMATED WASTE VOLUMES TO BE GENERATED DURING RETRIEVAL (TO BE TRANSFERRED TO THE DST'S OR OTHER AVAILABLE SAFE STORAGE). THE REPORT WILL ALSO DETAIL TANK SELECTION RATIONALE BASED ON THE PRIMARY OBJECTIVE OF MAXIMIZING RISK REDUCTION THROUGH THE RETRIEVAL OF MOBILE, LONG-LIVED RADIONUCLIDES AND PRINCIPLE NON RADIOLOGICAL HAZARDOUS CONSTITUENTS IN A MANNER WHICH IS SENSITIVE TO WASTE TREATMENT FACILITY REQUIREMENTS AND INFRASTRUCTURE</b></p>	9/30/2000 and annually thereafter.

<sup>1</sup> During the conduct of these negotiations, the parties agreed to two basic modifications to these requirements i.e., 1) To base milestones established on completions (e.g. complete construction), and 2) To re-order tanks selected for early retrieval in order to maximize risk reduction and cost efficiency.

**Description/Justification of Change (Cont.)**

	<b>CONSTRAINTS.</b> THE ANNUAL UPDATES WILL BE SUBMITTED TO ECOLOGY FOR APPROVAL <b>AS AGREEMENT PRIMARY DOCUMENTS.</b>	
M-45-02E	SUBMIT ANNUAL UPDATE OF SST RETRIEVAL SEQUENCE DOCUMENT FOR ECOLOGY APPROVAL. (SEE TEXT OF M-45-02 FOR ADDITIONAL DETAILS).	9/30/2000
M-45-00B M-45-00C	<p>COMPLETE RENEGOTIATION OF SECOND PHASE (I.E., 9/30/2006 THROUGH 9/30/2015) SST WASTE RETRIEVAL ACTIVITIES.</p> <p>THESE NEGOTIATIONS SHALL TAKE INTO ACCOUNT VARIABLES SUCH AS WORK IN PROGRESS, E.G., DOE'S DEVELOPING "PRIVATIZATION" TANK WASTE TREATMENT COMPLEX ACQUISITION INITIATIVE AND ENVIRONMENTAL AND HUMAN HEALTH RISKS ASSOCIATED WITH RELEASES FROM DOE's SSTs. NEGOTIATIONS SHALL BE DESIGNED TO ESTABLISH A SUFFICIENT NUMBER OF AGREEMENT MILESTONES AND TARGET DATES TO EFFECTIVELY DRIVE EACH PHASE OF WORK INCLUDING BUT NOT LIMITED TO: 1.) WASTE RETRIEVAL TECHNOLOGY DEVELOPMENT, 2.) RETRIEVAL PERFORMANCE EVALUATIONS, 3.) LEAK DETECTION, MONITORING, AND MITIGATION, 4.) SELECTION OF SST RETRIEVAL SEQUENCE, 5.) DESIGN, CONSTRUCTION AND OPERATION OF SST WASTE RETRIEVAL SYSTEMS, AND 6.) CLOSURE PLANNING AND CLOSURE PLAN DEVELOPMENT.</p> <p>DOE, AND DOE'S CONTRACTOR(S) WILL RETRIEVE AND TRANSFER SST WASTES INTO THE DST SYSTEM AS SOON AS SPACE IS MADE AVAILABLE, ALLOWING DST SPACE FOR TREATMENT PLANT FEED STAGING AND SAFETY ISSUE RESOLUTION. TRANSFER OF SST WASTE WILL BE MADE ONCE SUFFICIENT DST SYSTEM SPACE IS AVAILABLE TO ALLOW A TRANSFER OF AN OPERATIONALLY PRACTICABLE VOLUME OF WASTE. SST WASTE WILL BE RETRIEVED ON A PRIORITY BASIS WITH THE GOALS OF REDUCING ENVIRONMENTAL RISK AND TREATMENT PROCESS OPTIMIZATION. DOE AND ECOLOGY WILL AGREE ON THE CRITERIA TO DETERMINE ENVIRONMENTAL RISK REDUCTION.</p>	2/28/2004 <sup>2</sup>
M-45-02F	SUBMIT ANNUAL UPDATE OF SST RETRIEVAL SEQUENCE DOCUMENT FOR ECOLOGY APPROVAL. (SEE TEXT OF M-45-02 FOR ADDITIONAL DETAILS).	9/30/2001
M-45-02G	SUBMIT ANNUAL UPDATE OF SST RETRIEVAL SEQUENCE DOCUMENT FOR ECOLOGY APPROVAL. (SEE TEXT OF M-45-02 FOR ADDITIONAL DETAILS).	9/30/2002
M-45-02H	SUBMIT ANNUAL UPDATE OF SST RETRIEVAL SEQUENCE DOCUMENT FOR ECOLOGY APPROVAL. (SEE TEXT OF M-45-02 FOR ADDITIONAL DETAILS).	9/30/2003
M-45-02I	SUBMIT ANNUAL UPDATE OF SST RETRIEVAL SEQUENCE DOCUMENT FOR ECOLOGY APPROVAL. (SEE TEXT OF M-45-02 FOR ADDITIONAL DETAILS).	9/30/2004 and annually thereafter
M-45-03-T01	<p>COMPLETE SST WASTE RETRIEVAL DEMONSTRATION.</p> <p>INITIATE AND COMPLETE A FULL SCALE DEMONSTRATION OF SST RETRIEVAL TECHNOLOGY. THIS DEMONSTRATION WILL BE CONSIDERED COMPLETE WHEN NO LESS THAN 99% OF THE WASTE INVENTORY IS REMOVED FROM THE TANK.</p>	9/30/2003
M-45-03C	COMPLETE FULL SCALE SALTCAKE WASTE RETRIEVAL TECHNOLOGY DEMONSTRATION AT SINGLE-SHELL TANK S-112. WASTE SHALL BE RETRIEVED TO THE DST SYSTEM TO THE LIMITS OF THE TECHNOLOGY (OR TECHNOLOGIES) SELECTED. SELECTED SALTCAKE RETRIEVAL TECHNOLOGY (OR TECHNOLOGIES) MUST SEEK TO IMPROVE UPON THE PAST-PRACTICE SLUICING BASELINE IN THE AREAS OF EXPECTED RETRIEVAL EFFICIENCY, LEAK LOSS POTENTIAL, AND SUITABILITY FOR USE IN POTENTIALLY LEAKING TANKS. THIS DEMONSTRATION SHALL ALSO INCLUDE THE INSTALLATION AND IMPLEMENTATION OF FULL SCALE LEAK DETECTION, MONITORING, AND MITIGATION (LDMM) TECHNOLOGIES. THE PARTIES RECOGNIZE AND AGREE	9/30/2005

<sup>2</sup> These negotiations will also consider the need for additional compliant storage space. Should DOE fail to initiate construction of the Phase I Hanford Tank Waste Treatment Complex by December 31, 2001, as defined in Agreement interim milestone M-62-06, the due date for this M-45-00C milestone shall be automatically adjusted to 4/30/2002.

**Description/Justification of Change (Cont.)**

	<p>THAT THIS ACTION IS FOR DEMONSTRATION AND INITIAL WASTE RETRIEVAL PURPOSES. COMPLETION OF THIS DEMONSTRATION SHALL BE BY WRITTEN APPROVAL OF DOE AND ECOLOGY.</p> <p>GOALS OF THIS DEMONSTRATION SHALL INCLUDE THE RETRIEVAL TO SAFE STORAGE OF APPROXIMATELY 550 CURIES OF MOBILE, LONG-LIVED RADIOISOTOPES AND 99% OF TANK CONTENTS BY VOLUME (PER DOE BEST-BASIS INVENTORY DATA, 8/01/2000).</p>	
M-45-03-T03	<p>SUBMIT S-112 SALTCAKE WASTE RETRIEVAL TECHNOLOGY DEMONSTRATION FUNCTIONS AND REQUIREMENTS DOCUMENT.</p> <p>THIS DOCUMENT WILL ESTABLISH DEMONSTRATION SYSTEM SPECIFICATIONS (INCLUDING LDMM SYSTEM SPECIFICATIONS) AND WILL ALSO INCLUDE A SCOPING LEVEL RETRIEVAL PERFORMANCE EVALUATION (RPE). THE FUNCTIONS AND REQUIREMENTS DOCUMENT AND ITS ASSOCIATED RPE SHALL PROVIDE ENVIRONMENTAL AND HUMAN HEALTH RISK EVALUATION DATA/INFORMATION ASSOCIATED WITH ESTIMATED WASTE VOLUMES TO BE RETRIEVED, THE MAXIMUM VOLUME WHICH COULD LEAK DURING RETRIEVAL, AND RISK FROM RESIDUAL WASTE. THIS DOCUMENT WILL DETAIL KNOWN AND ESTIMATED RADIONUCLIDE CONTAMINATION AND CONTAMINANT MIGRATION WITHIN THE VADOSE ZONE AS BASES OF CALCULATION. LDMM AND RPE DOCUMENTATION PROVIDED WILL BE ADEQUATE TO ALLOW ECOLOGY TO ASSESS THE ADEQUACY OF THE DEMONSTRATION SYSTEMS. THIS DOCUMENT WILL INCORPORATE LESSONS LEARNED, INCLUDING LDMM, RETRIEVAL, INSTRUMENTATION, AND OPERATIONAL EXPERIENCE FROM PREVIOUS DOE AND INDUSTRY RELATED RETRIEVAL PROJECTS. DOE WILL SUBMIT ITS S-112 LDMM STRATEGY AS PART OF THE FUNCTIONS AND REQUIREMENTS DOCUMENT, PRIOR TO INITIATION OF DESIGN. THE S-112 FUNCTIONS AND REQUIREMENTS DOCUMENT WILL BE SUBMITTED FOR ECOLOGY APPROVAL AS AN AGREEMENT PRIMARY DOCUMENT.</p> <p>THIS FUNCTIONS AND REQUIREMENTS DOCUMENT WILL BE TIMELY SUBMITTED SO THAT PROJECT CRITICAL PATH IS NOT AFFECTED, AND SO AS TO ALLOW ADEQUATE TIME FOR DOE AND ECOLOGY REVIEW, REVISION AND APPROVAL.</p>	12/30/2001
M-45-03D	<p>COMPLETE S-112 SALTCAKE WASTE RETRIEVAL TECHNOLOGY DEMONSTRATION DESIGN (TO INCLUDE ALL PHYSICAL SYSTEMS INCLUDING DESIGN AND OPERATING STRATEGIES NECESSARY FOR LEAK DETECTION MONITORING AND MITIGATION (LDMM)).</p> <p>DESIGN WILL BE CONSIDERED COMPLETE WHEN 90% OF THE DESIGN HAS BEEN APPROVED FOR FABRICATION AND/OR CONSTRUCTION.</p>	5/31/2003
M-45-03E	<p>COMPLETE S-112 SALTCAKE WASTE RETRIEVAL TECHNOLOGY DEMONSTRATION CONSTRUCTION (TO INCLUDE ALL PHYSICAL SYSTEMS INCLUDING THOSE NECESSARY FOR LEAK DETECTION MONITORING AND MITIGATION).</p> <p>CONSTRUCTION WILL BE CONSIDERED COMPLETE WHEN ALL PROCESS EQUIPMENT IS INSTALLED AND ACCEPTANCE TESTS ARE COMPLETED.</p>	9/30/2004
M-45-03F	<p>COMPLETE FULL SCALE SLUDGE/HARD HEEL, CONFINED SLUICING AND ROBOTIC TECHNOLOGIES, WASTE RETRIEVAL DEMONSTRATION AT TANK C-104.</p> <p>WASTE SHALL BE RETRIEVED TO THE DST SYSTEM TO THE LIMITS OF THE TECHNOLOGY (OR TECHNOLOGIES) SELECTED. SELECTED SLUDGE/HARD HEEL TECHNOLOGY (OR TECHNOLOGIES) MUST SEEK TO IMPROVE UPON THE PAST-PRACTICE SLUICING BASELINE IN THE AREAS OF EXPECTED RETRIEVAL EFFICIENCY, LEAK LOSS POTENTIAL, AND SUITABILITY FOR USE IN POTENTIALLY LEAKING TANKS. CONFINED SLUICING IS DEFINED AS THE LOCALIZED ADDITION AND RETRIEVAL OF LIQUIDS AND WASTE. THIS DEMONSTRATION SHALL ALSO INCLUDE THE INSTALLATION AND IMPLEMENTATION OF FULL SCALE LEAK DETECTION, MONITORING, AND MITIGATION (LDMM) TECHNOLOGIES. THE PARTIES RECOGNIZE AND AGREE THAT THIS ACTION IS FOR DEMONSTRATION AND INITIAL WASTE RETRIEVAL PURPOSES. COMPLETION OF THIS DEMONSTRATION SHALL BE BY APPROVAL OF DOE AND ECOLOGY.</p>	<p>TBE</p> <p>(This milestone date shall be established during the parties' M-45-00C negotiations.)</p>

**Description/Justification of Change (Cont.)**

	GOALS OF THIS DEMONSTRATION SHALL INCLUDE THE RETRIEVAL TO SAFE STORAGE OF APPROXIMATELY 89 KG OF PLUTONIUM WHICH REPRESENTS APPROXIMATELY 17% OF THE TOTAL PLUTONIUM INVENTORY WITHIN THE SST SYSTEM), AND 99% OF TANK CONTENTS BY VOLUME (PER DOE'S BEST-BASIS INVENTORY DATA OF 8/01/2000).	
M-45-03-T04	<p>SUBMIT C-104 SLUDGE/HARD HEEL, CONFINED SLUICING AND ROBOTIC TECHNOLOGIES, WASTE RETRIEVAL DEMONSTRATION FUNCTIONS AND REQUIREMENTS DOCUMENT.</p> <p>THIS DOCUMENT WILL ESTABLISH DEMONSTRATION SYSTEM SPECIFICATIONS (INCLUDING LDMM SYSTEM SPECIFICATIONS) AND WILL ALSO INCLUDE A SCOPING LEVEL RETRIEVAL PERFORMANCE EVALUATION (RPE). THE FUNCTIONS AND REQUIREMENTS DOCUMENT AND ITS ASSOCIATED RPE SHALL PROVIDE ENVIRONMENTAL AND HUMAN HEALTH RISK EVALUATION DATA/INFORMATION ASSOCIATED WITH ESTIMATED WASTE VOLUMES TO BE RETRIEVED, THE MAXIMUM VOLUME WHICH COULD LEAK DURING RETRIEVAL, AND RISK FROM RESIDUAL WASTE. THIS DOCUMENT WILL DETAIL KNOWN AND ESTIMATED RADIONUCLIDE CONTAMINATION AND CONTAMINANT MIGRATION WITHIN THE VADOSE ZONE AS BASES OF CALCULATION. LDMM AND RPE DOCUMENTATION PROVIDED WILL BE ADEQUATE TO ALLOW ECOLOGY TO ASSESS THE ADEQUACY OF THE DEMONSTRATION SYSTEMS. THIS DOCUMENT WILL INCORPORATE LESSONS LEARNED, INCLUDING LDMM, RETRIEVAL, INSTRUMENTATION, AND OPERATIONAL EXPERIENCE FROM PREVIOUS DOE AND INDUSTRY RELATED RETRIEVAL PROJECTS. DOE WILL SUBMIT ITS C-104 LDMM STRATEGY AS PART OF THE FUNCTIONS AND REQUIREMENTS DOCUMENT, PRIOR TO INITIATION OF DESIGN. THIS DOCUMENT WILL BE SUBMITTED FOR ECOLOGY APPROVAL AS AN AGREEMENT PRIMARY DOCUMENT.</p> <p>THIS FUNCTIONS AND REQUIREMENTS DOCUMENT WILL BE TIMELY SUBMITTED SO THAT PROJECT CRITICAL PATH IS NOT AFFECTED, AND SO AS TO ALLOW ADEQUATE TIME FOR DOE AND ECOLOGY REVIEW, REVISION AND APPROVAL.</p>	12/31/2001
M-45-03G	<p>COMPLETE C-104 SLUDGE/HARD HEEL, CONFINED SLUICING AND ROBOTIC TECHNOLOGIES, WASTE RETRIEVAL COLD DEMONSTRATION.</p> <p>THIS FULL SCALE DEMONSTRATION WILL BE SUFFICIENT TO SUPPORT FINAL DESIGN AND TESTING OF ALL EQUIPMENT, INCLUDING THE LDMM APPROACH USED IN THE ACTUAL SYSTEM. THE DEMONSTRATION MUST ESTABLISH THE PERFORMANCE OF THE EQUIPMENT SPECIFIED IN THE FUNCTIONS AND REQUIREMENTS DOCUMENT. A LETTER REPORT WILL BE SUBMITTED TO ECOLOGY TO DOCUMENT THE RESULTS OF THE COLD DEMONSTRATION.</p>	6/30/2004
M-45-03H	<p>COMPLETE C-104 SLUDGE/HARD HEEL, CONFINED SLUICING AND ROBOTIC TECHNOLOGIES, WASTE RETRIEVAL DEMONSTRATION DESIGN (TO INCLUDE ALL PHYSICAL SYSTEMS INCLUDING DESIGN AND OPERATING STRATEGIES NECESSARY FOR LEAK DETECTION MONITORING AND MITIGATION (LDMM)).</p> <p>DESIGN WILL BE CONSIDERED COMPLETE WHEN 90% OF THE DESIGN HAS BEEN APPROVED FOR FABRICATION AND/OR CONSTRUCTION.</p>	9/30/2004
M-45-03I	<p>COMPLETE C-104 SLUDGE/HARD HEEL, CONFINED SLUICING AND ROBOTIC TECHNOLOGIES, WASTE RETRIEVAL DEMONSTRATION CONSTRUCTION (TO INCLUDE ALL PHYSICAL SYSTEMS INCLUDING THOSE NECESSARY FOR LEAK DETECTION MONITORING AND MITIGATION).</p> <p>CONSTRUCTION WILL BE CONSIDERED COMPLETE WHEN ALL PROCESS EQUIPMENT IS INSTALLED AND ACCEPTANCE TESTS ARE COMPLETED.</p>	9/30/2006
M-45-04-T01	<p>PROVIDE INITIAL SINGLE SHELL TANK RETRIEVAL SYSTEMS.</p> <p>COMPLETE CONSTRUCTION AND RELATED TESTING OF THE INITIAL SST RETRIEVAL SYSTEMS. THIS MILESTONE WILL PROVIDE RETRIEVAL SYSTEMS FOR AN ENTIRE SINGLE SHELL TANK FARM OR AN EQUIVALENT NUMBER OF TANKS.</p>	11/30/2003



**Description/Justification of Change (Cont.)**

M-45-04-T02	COMPLETE DESIGN FOR THE INITIAL SST RETRIEVAL SYSTEMS.	12/31/2000
M-45-04-T03	COMPLETE CONSTRUCTION FOR THE INITIAL SST RETRIEVAL SYSTEMS.	6/30/2003
M-45-05	RETRIEVE WASTE FROM ALL REMAINING SINGLE-SHELL TANKS.  COMPLETE WASTE RETRIEVAL FROM ALL REMAINING SINGLE-SHELL TANKS. RETRIEVAL STANDARDS AND COMPLETION DEFINITIONS ARE PROVIDED UNDER THE MAJOR MILESTONE. THE SCHEDULE REFLECTS RETRIEVAL ACTIVITIES ON A FARM-BY-FARM BASIS. IT ALSO ALLOWS FLEXIBILITY TO RETRIEVE TANKS FROM VARIOUS FARMS IF DESIRED TO SUPPORT SAFETY ISSUE RESOLUTION, PRETREATMENT OR DISPOSAL FEED REQUIREMENTS, OR OTHER PRIORITIES.	9/30/2018
M-45-05-T01	INITIATE TANK WASTE RETRIEVAL FROM ONE SINGLE-SHELL TANK.	12/31/2003
M-45-05-T02	INITIATE TANK RETRIEVAL FROM TWO ADDITIONAL SINGLE-SHELL TANKS.	9/30/2004
M-45-05-T03	INITIATE TANK RETRIEVAL FROM THREE ADDITIONAL SINGLE-SHELL TANKS.	9/30/2005
M-45-05-T04	INITIATE TANK RETRIEVAL FROM FOUR ADDITIONAL SINGLE-SHELL TANKS.	9/30/2006
M-45-05A	COMPLETE INITIAL WASTE RETRIEVAL FROM TANK S-102.  THE S-102 INITIAL WASTE RETRIEVAL TECHNOLOGY (OR TECHNOLOGIES) WILL BE SELECTED BASED ON THE PRINCIPLE CRITERIA OF MAXIMIZING THE RETRIEVAL OF MOBILE, LONG-LIVED RADIOISOTOPES AND NON-RADIOLOGICAL HAZARDOUS CONSTITUENTS. THE PARTIES RECOGNIZE AND AGREE THAT THIS ACTION IS FOR INITIAL WASTE RETRIEVAL PURPOSES. COMPLETION OF THIS INITIAL RETRIEVAL SHALL BE BY APPROVAL OF DOE AND ECOLOGY.  GOALS OF THIS INITIAL WASTE RETRIEVAL PROJECT SHALL INCLUDE THE RETRIEVAL TO SAFE STORAGE OF APPROXIMATELY 490 CURIES OF MOBILE, LONG-LIVED RADIOISOTOPES AND 99% OF TANK CONTENTS BY VOLUME (PER DOE BEST-BASIS INVENTORY DATA, 8/01/2000).  COMPLETION OF S-102 INITIAL WASTE RETRIEVAL IS SUBJECT TO SAFE STORAGE SPACE AVAILABILITY CONSISTENT WITH M-45-00B.	9/30/2006
M-45-05-T16	SUBMIT S-102 INITIAL WASTE RETRIEVAL FUNCTIONS AND REQUIREMENTS DOCUMENT.  THIS DOCUMENT WILL ESTABLISH DEMONSTRATION SYSTEM SPECIFICATIONS (INCLUDING LDMM SYSTEM SPECIFICATIONS) AND WILL ALSO INCLUDE A SCOPING LEVEL RETRIEVAL PERFORMANCE EVALUATION (RPE). THE FUNCTIONS AND REQUIREMENTS DOCUMENT AND ITS ASSOCIATED RPE SHALL ALSO PROVIDE ENVIRONMENTAL AND HUMAN HEALTH RISK EVALUATION DATA/INFORMATION ASSOCIATED WITH ESTIMATED WASTE VOLUMES TO BE RETRIEVED, THE MAXIMUM VOLUME WHICH COULD LEAK DURING RETRIEVAL, AND RISK FROM RESIDUAL WASTE. THIS DOCUMENT WILL DETAIL KNOWN AND ESTIMATED RADIONUCLIDE CONTAMINATION AND CONTAMINANT MIGRATION WITHIN THE VADOSE ZONE AS BASES OF CALCULATION. LDMM AND RPE DOCUMENTATION PROVIDED WILL BE ADEQUATE TO ALLOW ECOLOGY TO ASSESS THE ADEQUACY OF THE DEMONSTRATION SYSTEMS. THIS DOCUMENT WILL INCORPORATE LESSONS LEARNED, INCLUDING LDMM, RETRIEVAL, INSTRUMENTATION, AND OPERATIONAL EXPERIENCE FROM PREVIOUS DOE AND INDUSTRY RELATED RETRIEVAL PROJECTS. DOE WILL SUBMIT ITS S-102 LDMM STRATEGY AS PART OF THE FUNCTIONS AND REQUIREMENTS DOCUMENT, PRIOR TO INITIATION OF DESIGN. THIS DOCUMENT WILL BE SUBMITTED FOR ECOLOGY APPROVAL AS AN AGREEMENT PRIMARY DOCUMENT.  THIS FUNCTIONS AND REQUIREMENTS DOCUMENT WILL BE TIMELY SUBMITTED SO THAT PROJECT CRITICAL PATH IS NOT AFFECTED, AND SO AS TO ALLOW ADEQUATE TIME FOR DOE AND ECOLOGY REVIEW, REVISION AND APPROVAL.	10/30/2002
M-45-05B	COMPLETE S-102 INITIAL RETRIEVAL PROJECT DESIGN (TO INCLUDE ALL	3/31/2004

**Description/Justification of Change (Cont.)**

	<p>PHYSICAL SYSTEMS INCLUDING DESIGN AND OPERATING STRATEGIES NECESSARY FOR LEAK DETECTION MONITORING AND MITIGATION (LDMM)).</p> <p>THE DESIGN WILL BE CONSIDERED COMPLETE WHEN 90% OF THE DESIGN HAS BEEN APPROVED FOR FABRICATION AND/OR CONSTRUCTION.</p>	
M-45-05C	<p>COMPLETE S-102 INITIAL WASTE RETRIEVAL PROJECT CONSTRUCTION (TO INCLUDE ALL PHYSICAL SYSTEMS INCLUDING THOSE NECESSARY FOR LEAK DETECTION MONITORING AND MITIGATION).</p> <p>CONSTRUCTION WILL BE CONSIDERED COMPLETE WHEN ALL PROCESS EQUIPMENT IS INSTALLED AND ACCEPTANCE TESTS ARE COMPLETED.</p>	11/30/2005
M-45-05D	<p>ESTABLISH COMPLETION DATE FOR THE SECOND TANK, INITIAL WASTE RETRIEVAL.</p> <p>THIS SECOND FULL SCALE INITIAL WASTE RETRIEVAL PROJECT WILL BE CONDUCTED UNDER THE ONGOING CRITERIA OF MAXIMIZING THE RETRIEVAL TO SAFE STORAGE OF MOBILE, LONG LIVED RADIOISOTOPES AND PRINCIPLE NON-RADIOLOGICAL HAZARDOUS CONSTITUENTS. COMPLETION OF THIS INITIAL RETRIEVAL MILESTONE SHALL BE BY APPROVAL OF DOE AND ECOLOGY.</p>	12/31/2002
M-45-05-T17	<p>SUBMIT SECOND TANK INITIAL WASTE RETRIEVAL FUNCTIONS AND REQUIREMENTS DOCUMENT.</p> <p>THIS DOCUMENT WILL ESTABLISH DEMONSTRATION SYSTEM SPECIFICATIONS (INCLUDING LDMM SYSTEM SPECIFICATIONS) AND WILL ALSO INCLUDE A SCOPING LEVEL RETRIEVAL PERFORMANCE EVALUATION (RPE). THE FUNCTIONS AND REQUIREMENTS DOCUMENT AND ITS ASSOCIATED RPE SHALL ALSO PROVIDE ENVIRONMENTAL AND HUMAN HEALTH RISK EVALUATION DATA/INFORMATION ASSOCIATED WITH ESTIMATED WASTE VOLUMES TO BE RETRIEVED, THE MAXIMUM VOLUME WHICH COULD LEAK DURING RETRIEVAL, AND RISK FROM RESIDUAL WASTE. THIS DOCUMENT WILL DETAIL KNOWN AND ESTIMATED RADIONUCLIDE CONTAMINATION AND CONTAMINANT MIGRATION WITHIN THE VADOSE ZONE AS BASES OF CALCULATION. LDMM AND RPE DOCUMENTATION PROVIDED WILL BE ADEQUATE TO ALLOW ECOLOGY TO ASSESS THE ADEQUACY OF THE DEMONSTRATION SYSTEMS. THIS DOCUMENT WILL INCORPORATE LESSONS LEARNED, INCLUDING LDMM, RETRIEVAL, INSTRUMENTATION, AND OPERATIONAL EXPERIENCE FROM PREVIOUS DOE AND INDUSTRY RELATED RETRIEVAL PROJECTS. DOE WILL SUBMIT ITS LDMM STRATEGY AS PART OF THE FUNCTIONS AND REQUIREMENTS DOCUMENT, PRIOR TO INITIATION OF DESIGN. THIS DOCUMENT WILL BE SUBMITTED FOR ECOLOGY APPROVAL AS AN AGREEMENT PRIMARY DOCUMENT.</p> <p>THIS FUNCTIONS AND REQUIREMENTS DOCUMENT WILL BE TIMELY SUBMITTED SO THAT PROJECT CRITICAL PATH IS NOT AFFECTED, AND SO AS TO ALLOW ADEQUATE TIME FOR DOE AND ECOLOGY REVIEW, REVISION AND APPROVAL.</p>	4/30/2004
M-45-05E	<p>COMPLETE SECOND TANK INITIAL RETRIEVAL PROJECT DESIGN (TO INCLUDE ALL PHYSICAL SYSTEMS INCLUDING DESIGN AND OPERATING STRATEGIES NECESSARY FOR LEAK DETECTION MONITORING AND MITIGATION (LDMM)).</p> <p>THE DESIGN WILL BE CONSIDERED COMPLETE WHEN 90% OF THE DESIGN HAS BEEN APPROVED FOR FABRICATION AND/OR CONSTRUCTION.</p>	6/30/2006
M-45-05F	<p>COMPLETE SECOND INITIAL WASTE RETRIEVAL PROJECT CONSTRUCTION (TO INCLUDE ALL PHYSICAL SYSTEMS INCLUDING THOSE NECESSARY FOR LEAK DETECTION MONITORING AND MITIGATION).</p> <p>CONSTRUCTION WILL BE CONSIDERED COMPLETE WHEN ALL PROCESS EQUIPMENT IS INSTALLED AND ACCEPTANCE TESTS ARE COMPLETED.</p>	<p>TBE</p> <p>(Specific tank identification and this milestone date shall be established no later than 12/31/02.)</p>
M-45-05-T05	INITIATE TANK RETRIEVAL FROM FIVE ADDITIONAL SINGLE-SHELL TANKS.	9/30/2007
M-45-05-T06	INITIATE TANK RETRIEVAL FROM FIVE ADDITIONAL SINGLE-SHELL TANKS.	9/30/2008



**Description/Justification of Change (Cont.)**

M-45-05-T07	INITIATE TANK RETRIEVAL FROM SEVEN ADDITIONAL SINGLE-SHELL TANKS.	9/30/2009
M-45-05-T08	INITIATE TANK RETRIEVAL FROM EIGHT ADDITIONAL SINGLE-SHELL TANKS.	9/30/2010
M-45-00C M-45-00D	<p>COMPLETE RENEGOTIATION OF THE REMAINDER OF THE SST WASTE RETRIEVAL AND CLOSURE PROGRAM.</p> <p>THESE NEGOTIATIONS WILL ESTABLISH REGULATORY REQUIREMENTS FOR THE REMAINDER OF THE SST WASTE RETRIEVAL AND CLOSURE PROGRAM (THROUGH COMPLETION OF CLOSURE AT ALL SINGLE SHELL TANK FARMS). NEGOTIATIONS WILL INCLUDE MODIFICATION AS MAY BE NECESSARY OF COMPLETION DATES FOR SST WASTE RETRIEVAL AND SST FARM CLOSURE BASED ON EXPERIENCE GAINED FROM SST AND DST WASTE RETRIEVAL WORK COMPLETED, CORRECTIVE ACTIONS, PHASE I TREATMENT COMPLEX OPERATIONS, PHASE II TREATMENT PLANNING, KNOWN AND LIKELY VADOSE ZONE AND GROUNDWATER IMPACTS, AND OTHER AVAILABLE ENVIRONMENTAL IMPACT INFORMATION.</p> <p>DOE, AND DOE's CONTRACTOR(S) WILL RETRIEVE AND TRANSFER SST WASTES INTO THE DST SYSTEM AS SOON AS SPACE IS MADE AVAILABLE, ALLOWING DST SPACE FOR TREATMENT PLANT FEED STAGING AND SAFETY ISSUE RESOLUTION. TRANSFER OF SST WASTE WILL BE MADE ONCE SUFFICIENT DST SYSTEM SPACE IS AVAILABLE TO ALLOW A TRANSFER OF AN OPERATIONALLY PRACTICABLE VOLUME OF WASTE. SST WASTE WILL BE RETRIEVED ON A PRIORITY BASIS WITH THE GOALS OF REDUCING ENVIRONMENTAL RISK AND TREATMENT PROCESS OPTIMIZATION. DOE AND ECOLOGY WILL AGREE ON THE CRITERIA TO DETERMINE ENVIRONMENTAL RISK REDUCTION.</p>	6/30/2011
M-45-05-T09	INITIATE TANK RETRIEVAL FROM TEN ADDITIONAL SINGLE-SHELL TANKS.	9/30/2011
M-45-05-T10	INITIATE TANK RETRIEVAL FROM 12 ADDITIONAL SINGLE-SHELL TANKS.	9/30/2012
M-45-05-T11	INITIATE TANK RETRIEVAL FROM 14 ADDITIONAL SINGLE-SHELL TANKS.	9/30/2013
M-45-05-T12	INITIATE TANK RETRIEVAL FROM 17 ADDITIONAL SINGLE-SHELL TANKS.	9/30/2014
M-45-05-T13	INITIATE TANK RETRIEVAL FROM 20 ADDITIONAL SINGLE-SHELL TANKS.	9/30/2015
M-45-05-T14	INITIATE TANK RETRIEVAL FROM 20 ADDITIONAL SINGLE-SHELL TANKS.	9/30/2016
M-45-05-T15	INITIATE TANK RETRIEVAL FROM 20 ADDITIONAL SINGLE-SHELL TANKS.	9/30/2017
M-45-06	<p>COMPLETE CLOSURE OF ALL SINGLE-SHELL TANK FARMS <b>IN ACCORDANCE WITH APPROVED CLOSURE/POST CLOSURE PLAN(S).</b></p> <p>THE SINGLE-SHELL TANK CLOSURE WORK PLAN WILL BE PREPARED DESCRIBING THE WORK INTEGRATION PROCESS FOR SINGLE-SHELL TANK CLOSURES AND STATUS OF WORK AND INTEGRATION PROCESS. KNOWN ISSUES WILL BE IDENTIFIED AND AN EXPLANATION WILL BE GIVEN ON HOW THESE ISSUES ARE BEING ADDRESSED. THIS WORK PLAN WILL BE PROVIDED TO ECOLOGY FOR REVIEW/COMMENT AND WILL BE USED AS A ROADMAP FOR CLOSURE OF THE SINGLE-SHELL TANKS. BECAUSE OF THE UNCERTAINTIES IN THE CLOSURE PROCESS, THE WORK PLAN WILL EVOLVE AS THESE UNCERTAINTIES ARE RESOLVED AND EVENTUALLY IT WILL BECOME THE SST CLOSURE/POST CLOSURE PLAN(S) ISSUED FOR ECOLOGY'S APPROVAL UNDER SUBSEQUENT TPA INTERIM MILESTONES. MAJOR WORK AREAS COVERED IN THE WORK PLAN WILL INCLUDE WASTE RETRIEVAL, OPERABLE UNITS CHARACTERIZATION, TECHNOLOGIES DEVELOPMENT TO SUPPORT CLOSURE, REGULATORY PATHWAY AND STRATEGY FOR ACHIEVING CLOSURE.</p>	9/30/2024
M-45-06-T01	SUBMIT TANK CLOSURE/POST CLOSURE PLAN FOR SELECTED CLOSURE DEMONSTRATION OPERABLE UNIT OR TANK FARM TO ECOLOGY FOR APPROVAL.	11/30/2004

**Description/Justification of Change (Cont.)**

M-45-06-T05	<p>SUBMIT TANK FARM CLOSURE/POST-CLOSURE WORKPLAN UPDATE.</p> <p>BECAUSE OF THE UNCERTAINTIES IN THE CLOSURE PROCESS, THE WORK PLAN WILL EVOLVE AS THESE UNCERTAINTIES ARE RESOLVED AND EVENTUALLY IT WILL BECOME THE SST CLOSURE/POST CLOSURE PLAN(S) ISSUED FOR ECOLOGY'S APPROVAL UNDER SUBSEQUENT TPA INTERIM MILESTONES. MAJOR WORK AREAS COVERED IN THE WORK PLAN WILL INCLUDE WASTE RETRIEVAL, OPERABLE UNITS CHARACTERIZATION, TECHNOLOGIES DEVELOPMENT TO SUPPORT CLOSURE, REGULATORY PATHWAY AND STRATEGY FOR ACHIEVING CLOSURE.</p> <p>THIS UPDATE OF THE MAY 1996 CLOSURE WORKPLAN WILL INCLUDE, BUT IS NOT LIMITED TO THE INCORPORATION OF:</p> <ul style="list-style-type: none"> <li>• DATA ACQUIRED DURING THE C-106 RETRIEVAL PROJECT (COMPLETED DURING FY2000),</li> <li>• RESULTS FROM RECENT ACTIVITIES FOCUSING ON MAXIMIZING RISK REDUCTION,</li> <li>• INFORMATION OBTAINED VIA VADOSE ZONE, GROUNDWATER MONITORING, AND RFI/CMS PROCESSES, AND</li> <li>• LESSONS LEARNED FROM THE AX FARM RPE.</li> </ul> <p>DOE'S TANK FARM CLOSURE/POST-CLOSURE WORKPLAN UPDATE WILL BE SUBMITTED TO ECOLOGY AS A PRIMARY DOCUMENT.</p>	6/30/2002
M-45-06-T06	<p>SUBMIT TANK FARM CLOSURE/POST CLOSURE WORKPLAN UPDATE.</p> <p>THIS UPDATE OF THE 6/30/02 CLOSURE WORKPLAN WILL INCLUDE, BUT IS NOT LIMITED TO THE INCORPORATION OF:</p> <ul style="list-style-type: none"> <li>• NEWLY AVAILABLE DATA,</li> <li>• A MORE DETAILED ASSESSMENT OF THE POINT OF COMPLIANCE AND RISK INFORMATION,</li> <li>• UPDATED DATA FROM VADOSE ZONE AND GROUNDWATER CHARACTERIZATION AND MONITORING,</li> <li>• NEW INFORMATION FROM M-45 SERIES RETRIEVAL ACTIONS COMPLETED TO DATE.</li> </ul> <p>THE CLOSURE/POST CLOSURE WORKPLAN WILL BE SUBMITTED TO ECOLOGY AS A PRIMARY DOCUMENT.</p>	6/30/2004
M-45-06-T07	<p>SUBMIT TANK FARM CLOSURE/POST CLOSURE WORKPLAN UPDATE.</p> <p>THIS UPDATE OF THE 6/30/04 CLOSURE WORKPLAN WILL INCLUDE, BUT IS NOT LIMITED TO THE INCORPORATION OF:</p> <ul style="list-style-type: none"> <li>• DATA OBTAINED FROM THE "LIMITS OF TECHNOLOGY" SALTCAKE TANK RETRIEVAL TECHNOLOGY DEMONSTRATION,</li> <li>• RESULTS FROM OTHER SST RETRIEVAL ACTIVITIES,</li> <li>• UPDATED DATA FROM VADOSE ZONE AND GROUNDWATER CHARACTERIZATION AND MONITORING,</li> <li>• RIVER PROTECTION PROJECT AGREEMENT REQUIREMENTS, INCLUDING WASTE TREATMENT COMPLEX PROCESSING CAPABILITY,</li> </ul> <p>CLOSURE/POSTCLOSURE WORKPLANS WILL BE SUBMITTED TO ECOLOGY AS PRIMARY DOCUMENTS.</p>	6/30/2006 (And every two years thereafter)
M-45-06-T02	ECOLOGY WILL ISSUE FINAL CLOSURE/POST CLOSURE PLAN FOR SELECTED CLOSURE DEMONSTRATION OPERABLE UNIT OR TANK FARM.	9/30/2006
M-45-06-T03	INITIATE CLOSURE ACTIONS ON AN OPERABLE UNIT OR TANK FARM BASIS. CLOSURE SHALL FOLLOW COMPLETION OF THE RETRIEVAL ACTIONS UNDER PROPOSED MILESTONE M-45-05. CLOSURE WILL BE DEFINED IN AN APPROVED CLOSURE PLAN FOR THE DEMONSTRATION FARM. FINAL CLOSURE IS DEFINED AS REGULATORY APPROVAL OF COMPLETION OF CLOSURE ACTIONS.	3/31/2012
M-45-06-T04	COMPLETE CLOSURE ACTIONS ON ONE OPERABLE UNIT OR TANK FARM.	3/31/2014

**Description/Justification of Change (Cont.)**

M-45-08	ESTABLISH FULL SCALE CAPABILITY FOR MITIGATION OF WASTE TANK LEAKAGE DURING RETRIEVAL SLUICING OPERATIONS.	6/30/2003
M-45-08A	COMPLETE SYSTEM DESIGN AND OPERATING STRATEGY FOR TANK LEAK MONITORING AND MITIGATION FOR SYSTEMS TO BE USED IN CONJUNCTION WITH INITIAL RETRIEVAL SYSTEMS FOR SSTs.	12/31/2000
M-45-08B	COMPLETE DEMONSTRATION AND INSTALLATION OF LEAK MONITORING AND MITIGATION SYSTEMS FOR INITIAL SST RETRIEVAL.	6/30/2003
M-45-09E	SUBMIT ANNUAL PROGRESS REPORTS ON THE DEVELOPMENT OF WASTE TANK LEAK MONITORING/DETECTION AND MITIGATION ACTIVITIES IN SUPPORT OF M-45-08. REPORTS WILL PROVIDE A DESCRIPTION OF WORK ACCOMPLISHED UNDER M-45-08, TECHNOLOGIES, APPLICATIONS, COST SCHEDULE, AND TECHNICAL DATA. REPORTS WILL ALSO EVALUATE DEMONSTRATIONS PERFORMED BY DOE AND PRIVATE INDUSTRY FOR APPLICABILITY TO SST RETRIEVAL AND PROVIDE RECOMMENDATIONS FOR FURTHER TESTING FOR USE IN RETRIEVAL OPERATIONS.	9/30/2000
M-45-09F	SUBMIT ANNUAL PROGRESS REPORTS ON THE DEVELOPMENT OF WASTE TANK LEAK MONITORING/DETECTION AND MITIGATION ACTIVITIES IN SUPPORT OF M-45-08.  REPORTS WILL PROVIDE A DESCRIPTION OF WORK ACCOMPLISHED UNDER M-45-08, TECHNOLOGIES, APPLICATIONS, COST, SCHEDULE, AND TECHNICAL DATA. REPORTS WILL ALSO EVALUATE DEMONSTRATIONS PERFORMED BY DOE AND PRIVATE INDUSTRY FOR APPLICABILITY TO SST RETRIEVAL AND PROVIDE RECOMMENDATIONS FOR FURTHER TESTING FOR USE IN RETRIEVAL OPERATIONS.	9/30/2001
M-45-09G	SUBMIT ANNUAL PROGRESS REPORTS ON THE DEVELOPMENT OF WASTE TANK LEAK MONITORING/DETECTION AND MITIGATION ACTIVITIES IN SUPPORT OF M-45-08.  REPORTS WILL PROVIDE A DESCRIPTION OF WORK ACCOMPLISHED UNDER M-45-08, TECHNOLOGIES, APPLICATIONS, COST, SCHEDULE, AND TECHNICAL DATA. REPORTS WILL ALSO EVALUATE DEMONSTRATIONS PERFORMED BY DOE AND PRIVATE INDUSTRY FOR APPLICABILITY TO SST RETRIEVAL AND PROVIDE RECOMMENDATIONS FOR FURTHER TESTING FOR USE IN RETRIEVAL OPERATIONS.	9/30/2002
M-45-09H	SUBMIT ANNUAL PROGRESS REPORTS ON THE DEVELOPMENT OF WASTE TANK LEAK MONITORING/DETECTION AND MITIGATION ACTIVITIES IN SUPPORT OF M-45-08.  REPORTS WILL PROVIDE A DESCRIPTION OF WORK ACCOMPLISHED UNDER M-45-08, TECHNOLOGIES, APPLICATIONS, COST, SCHEDULE, AND TECHNICAL DATA. REPORTS WILL ALSO EVALUATE DEMONSTRATIONS PERFORMED BY DOE AND PRIVATE INDUSTRY FOR APPLICABILITY TO SST RETRIEVAL AND PROVIDE RECOMMENDATIONS FOR FURTHER TESTING FOR USE IN RETRIEVAL OPERATIONS.	9/30/2003 and annually thereafter
M-45-12-T01	SUBMIT AN OPTIONS REPORT DOCUMENTING DOE ASSESSMENT OF ACTIONS THAT COULD BE TAKEN TO INCREASE AVAILABLE TANK SPACE FOR SST WASTE RETRIEVAL.  THIS REPORT WILL EVALUATE AND DOCUMENT OPTIONS FOR ACQUIRING ADDITIONAL STORAGE SPACE FOR SST RETRIEVAL IN ADDITION TO THAT REQUIRED UNDER THIS M-45-00-01A CHANGE REQUEST. PRINCIPLE ACTIONS REQUIRED TO IMPLEMENT EACH OPTION WITHIN A REASONABLE TIME WILL BE IDENTIFIED. THE PRINCIPLE OPTIONS WILL HAVE DETAILED COST AND SCHEDULES FOR IMPLEMENTATION.	2/28/2002

M-45-00-01A  
August 30, 2000

**Description/Justification of Change (Cont.)**